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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,525	05/12/2004	Chang-Lung Du	ADTP0060USA	3524
27765	7590	08/09/2005	EXAMINER	
NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)			CHIEN, LUCY P	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	
			2871	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/709,525	DU, CHANG-LUNG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Lucy P. Chien	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang et al (US 20020027634) and of Saito et al (US 20030164903) in view of the prior art (Admission).

Kang et al discloses (Figure 4) a LCD panel (140) formed within the housing (160), the LCD panel comprising a display area (above LC panel), a peripheral circuit (Figure 3, 120) formed on the LCD panel (140) and a flexible printed circuit board (112) formed on the edge of the peripheral circuit area of the LCD panel (140) and FPCB having an extending portion formed below the lower surface of the extending portion.

Kang et al does not disclose the use of an LED light mounted on the FPCB and having openings formed in the housing for the LED.

Saito et al discloses (Figure 1, Page 1, [0007]) LED's (LED1, LED2) on top of the Flexible Printed Circuit Board (PCB) where the housing would have to have an opening formed for the LEDS if the FPCB extended portion formed below the lower surface of the housing disclosed by Kang et al.

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Saito et al and Kang et al do not disclose the display area having peripheral circuit formed on the LCD panel and plurality of driver integrated circuits formed in the peripheral circuit area of the LCD panel.

The Admission (Figure 1) discloses a LCD panel (12) comprising a display are (the square box in the middle of the larger square) having peripheral circuit (24) formed on the LCD panel (12) and a plurality of driver integrated circuits (22) formed in the peripheral circuit area of the LCD panel (12).

It would have been obvious to one skilled in the art to modify Kang et al's display to include Saito et al's LED's to further include the Admission's circuits to produce a low cost liquid crystal display panel with a flexible printed circuit board with capabilities of obtaining a uniformly bright display screen by efficiently introducing light-emitting diodes. (Saito, Page 1, [0010]).

Regarding Claim 2,

Kang et al and the Admission do not disclose the housing is a rectangular-platy reflect frame.

Saito et al discloses (Figure 1, Page 1, [0012]) that the housing is a rectangular-platy reflect-frame to enable continuous close contact between a light-emitting element such as a light-emitting diode and the light entry plane of a light guide body. (Page 1, [0011]).

It would have been obvious to one skilled in the art to modify Kang et al's display to include Saito et al's LED's to further include the Admission's circuits motivated by

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the desire to enable continuous close contact between a light-emitting element such as a light-emitting diode and the light entry plane of a light guide body. (Page 1, [0011]).

Regarding Claim 3,

In addition to Saito et al, Kang et al, and the admission as disclosed above, Kang et al further discloses the use of a TFT-LCD panel. (Page 1, [0005]).

Regarding Claim 4,

In addition to Saito et al, Kang et al, and the admission as disclosed above, Kang et al further discloses where the FPC board comprises of a tape carrier package. (Page 1, [0009]).

Regarding Claim 5,

In addition to Saito et al, Kang et al, and the admission as disclosed above, Saito et al further discloses the LED backlight source of the LCD panel is used to illuminate the LCD panel. (Page 1, [00010]).

Regarding Claim 6,

In addition to Saito et al, Kang et al, and the admission as disclosed above, the admission further discloses that each driver integrated circuit (22) comprises a gate and source driver integrated circuit (22).

Regarding Claim 7,

In addition to Saito et al, Kang et al, and the admission as disclosed above, Saito et al further discloses (Figure 1 (GLB), Abstract) a light guide body between the LCD panel and the housing to obtain an uniformly bright display panel.

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Regarding Claim 8.

In addition to Saito et al, Kang et al, and the admission as disclosed above, Saito et al further discloses (Page 1 [0007]) a plurality of electrical components formed below the lower surface of the FPC.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucy Chien  
Examiner  
Art Unit 2871  
LC

  
ROBERT H. KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800